large areas having a fibrilla structure in the meshes of which is basic staining, colloid-like material. There are thick bands of fibrous tissue between the colloid areas and the trabeculae dividing up the area. The fibrous tissue shows round cell and eosinophilic infiltration and scattered polymorphonuclear leukocytes.

The appearance is that of a colloid carcinoma which in the appendix is very benign. They are called carcinoids.

Diagnosis: Carcinoid of the appendix.

COMMENT

According to E. S. J. King,[3] "epithelial tumors arising in the appendix are of two kinds: (1) true carcinomata, rare in occurrence; (2) nonmalignant carcinoids, more common." Carcinoid tumors occur usually in young people and are observed in about 0.4 per cent of all appendiceal lesions in King's experience. Carcinoid tumors may occur in any part of the alimentary canal from the cardia to the anus, but are usually noted in the region of the appendix, in which location the following types have been observed:

1. A hard, circumscribed nodule at the tip of the appendix which measures up to 18 millimeters in diameter and when sectioned has a uniform yellow color.

2. A nodule obliterating the lumen of the tube.

3. Rare diffuse type resulting from invasion of the muscular layer by the tumor cells.

4. The multiple tumor masses.

The most likely theory concerning the origin of these tumors is that they are (1) entodermal, and (2) ectodermal. The structure of the typical tumor with its spheroidal argentaffin cells, that is, cells containing granules capable of reducing silver preparations, closely resembling the structure of many brain tumors, gliomata of the retina, neurocytomata of the adrenal and other neoplasms of the nervous tissue origin. On this account King believes that these carcinoid tumors arise from nervous cells most likely derived from the sympathetic system.

H. Reid and H. Smith [4] state that the condition as a rule is benign but several cases of metastasis to the liver, the peritoneum, and the lymph nodes are on record. The growth as a rule is confined to the mucous and the submucous layers, with a tendency to infiltrate into the muscularis. Various types of cells include the spheroid (the most common type), cuboidal, cylindrical, endothelial, and mixed types. Colloid degeneration has also been noted.

Of primary interest in this case is the diagnosis of a carcinoid appendix which is considered a nonmalignant epithelial tumor. According to H. Reid there are, nevertheless, on record several cases of metastasis to the liver, peritoneum, and the lymph nodes.[5]

Of added interest, and a factor which should not be overlooked on account of subsequent possible pathology, is the gelatinous material which was observed protruding from the side of the ruptured appendix. No report was returned on this material although it was sent to the laboratory with the appendix for diagnosis. It is a well-known fact that leakage from a mucocele of the appendix may spread throughout the peritoneal cavity and cause death from mechanical obstruction. According to Frank, in his book on gynecological pathology, he states: "In the majority of cases epithelial cells are contained in the pseudomucinous mass. These cells continue to secrete, form gland complexes and cysts. No invasive tendency is shown, the organ being wrapped (but not penetrated) in a jelly-like envelope. Because of the physical properties, the peritoneum cannot readily absorb the gelatinous substance which closes the subperitoneal lymphatics. A foreign body peritonitis results. (Granulation tissue, giant cell and connective tissue production, endothelial proliferation.) The cellular elements produced by the peritoneum penetrate the inert colloid and form septa and encapsulated masses. If the source of supply is not cut off by removal of the primary focus, or if secreting cells are contained in the jell, incredibly large amounts of pseudomucin may be produced. Biggs removed 350 pounds of this material in twelve operations in a period of nine years before the patient died at seventy-five. A few cures are reported after repeated operation; seventeen recoveries in forty cases."

V. Lieblein,[6] writing of rupture of appendiceal mucocele, refers to thirty-five surgically treated cases of pseudomyxoma peritonei of appendiceal origin in which nine deaths occurred.

Since the operation of this patient three months ago, she has complained of a fullness and soreness to the right of her bladder. The patient will be carefully watched and reported on, if any unusual symptoms occur.

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REFERENCES

1. The Cyclopedia of Med., 1:752.

2. Reid, H., and Smith, H.: Brit. M. J., 1:492 (March 15), 1930.

3. King, E. S. J.: J. Coll. Surgeons, Australasia, 2:364 (March), 1930.

4. Reid, H., and Smith, H.: Brit. M. J., 1:492 (March 15), 1930.

5. Reid, H., and Smith, H.: Brit. M. J., 1:492 (March 15), 1930.

6. Lieblein: Beitr. Z. klin. Chir., 147:179, 1929.

FOREIGN BODY IN THE ISCHIORECTAL SPACE

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MANY cases have been reported in which chicken bones, fish bones, seeds, and similar small objects have been recovered from diseased crypts of Morgagni; and that upon removal of these there has been almost immediate relief from symptoms. At times, fish bones, or rather small foreign bodies, have penetrated the rectal mucosa and entered the ischiorectal spaces, where an in-

flammatory process was set up and an abscess resulted.

I wish to report a rather unusual case which just recently came under my observation.

REPORT OF CASE

On August 20, 1931, a male, age fifty-one, presented himself at the rectal clinic of the Cedars of Lebanon Hospital complaining of severe pain in the rectum, of ten days' duration. The patient thought that the pain came on rather suddenly when he had strained at stool. He stated that the pain had been more or less constant during this period, and was aggravated by bowel movement. He could get little or no relief from heat locally, and no relief from the use of suppositories.

Examination revealed a swelling, the size of an orange, in the left ischiorectal region. This was hard and very painful to the touch. There was no fluctuation present. Rectal examination aided in the diagnosis of ischiorectal abscess. The pulse and temperature were normal.

The next day, under gas-oxygen-ether anesthesia, the man was operated on. An incision was made into the hard indurated area. Very little pus was found; but on investigation a large spicule of chicken bone, one and one-quarter inches long and one-quarter inch wide, with very pointed ends, was found lying in the abscess. A large probe was passed into the wound, and this very easily entered the rectum through one of the crypts of Morgagni. The inflamed area was laid wide open and much of the indurated tissue excised. Further examination of the rectum revealed four deep crypts, which were also excised. The patient made a very uneventful recovery, being carefully watched so that the wound would heal from the bottom out.

The probability in this case, and the interesting point is that the bone, large as it was and pointed at its ends, passed through the entire gastro-intestinal tract without doing any damage, only to lodge in one of the crypts and then invade the ischiorectal space. It also emphasizes the part played by these crypts in the formation of abscesses and fistulas, as brought out in a recent paper by Buie of the Mayo Clinic and in a more recent paper by McKenney of Buffalo. It might be added that the patient did not recall the exact time of swallowing the bone.

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Ground Squirrels Carry Plague.—Plague is primarily a disease of rodents, and secondarily and accidentally a disease of man. Man's safety from the disease lies in the exclusion of the rodent and his parasites. This is the basis of all preventive and eradicative work. If man can live in rodent-free surroundings he need have no fear of plague, because if there be no rodents there can be no rodent parasites, and for all practical purposes the flea may be considered as the common vector of the disease from rodent to rodent and from rodent to man. The eradication of bubonic plague, therefore, means the eradication of rodents.

In America we have two rodents which are comprehended in this problem, the rat and the ground squirrel, and apparently each plays a very distinct rôle in the propagation and perpetuation of the disease. The rat (*Mus norwegicus, M. rattus, M. alexandrinus,* and *M. musculus*) is distinctly domestic in its habits, and therefore comes in more or less intimate contact with man. It is also a frequenter of the great highways of the world, traveling long distances in ships and to a limited extent on trains. It is the producer of acute outbreaks, the conduit for the carriage of the virus from its perpetuating reservoir to the body of man. The ground squirrel (*Citellus beechyi*), on the contrary, is not a dweller in human habitations, does not travel except by short migrations, and is an almost negligible factor in the direct transfer of the disease to man. Its great function in the plague scheme is that of a rural reservoir from which from time to time the disease flows over to the suburban rat, thence to his city cousin, and thence to man. This condition is not peculiar to America alone, since in China and Thibet the marmota (*Arctomys bobac*) and allied species perform a similar function.—*Weekly Bulletin, California Department of Public Health.*

Changes Proposed in Federal Food and Drugs Act.—A redraft of the Federal Food and Drugs Act has been completed and submitted to the Department of Justice for review. Provision is made for the expansion of the Act to include cosmetics and to regulate the advertising of foods, drugs, and cosmetics, but it does not propose the censorship of advertising in advance of its use. It does provide, however, that false advertising shall be classed as illegal and the responsibility for truthful advertising is placed squarely upon manufacturer and distributor.

Among other provisions in the proposed redraft of the Act are the following:

1. Authorization to the Secretary of Agriculture to establish food standards having the force and effect of law.
2. A fully informative label regarding the ingredients of a product.
3. Elimination of slack filling of containers and the use of deceptively shaped packages.
4. Inspection of food and drugs at point of origin.
5. Strengthening the present law relating to poisonous or other added deleterious ingredients which might render food harmful to health.
6. Declaration of the presence of dangerous drugs on the labels of products with possible restriction on the sale of dangerous drugs.
7. Strengthening the present law relative to the sale of drugs which bear false and fraudulent therapeutic claims.
8. Inclusion in the definition of drugs of mechanical devices intended for the treatment of disease.

These indicate the most important of the proposed changes in the Act. The general public has been invited by the Food and Drugs Administration of the United States Department of Agriculture to express its opinions relative to these proposed changes and to suggest other changes that might make the Food and Drugs Act more effective in the protection of the general public health.—*Weekly Bulletin, California Department of Public Health.*

Physician's Part in Public Health Activities.—The physician is the keynote that supports the whole structure of public health. Many other professions have definite and important places in the structure, but without the physician no adequate structure may be built up.

The physician, alone, would be helpless without the chemist, the engineer, the dentist, the nurse, and all those other important professions that supply scientific material that goes to build up our wonderful preventive health measures for the conservation of life.

Scientific discovery has given us abundance of health conservation material and the part played by the physician both in the discovery and in the practical working out of the same on the patients is reason enough why the physician should be placed in the highest positions of public health.

All physicians may not, in fact, do not always recognize public health as their most important work. Yet the reason is not difficult to find. The doctor's work is with the sick patient for the most part, and that this is so is not always the physician's wish, but seems necessary because of the public's fallacious idea that he wishes only to be consulted at such times.

Already this situation is changing, due to a better understanding by the public that the physician, by training, may render advice and service that will keep us well and also by an awakening on the part of the physician that preventive medicine is a field that should and can be covered by the general practitioner. (Dr. Charles Duncan, Secretary, Board of Health, State of New Hampshire.)—*Weekly Bulletin, California Department of Public Health.*